

AN
ACCOUNT OF THE RECENT EPIDEMIC
OF
PUERPERAL FEVER,

AS IT APPEARED
IN THE DUBLIN LYING-IN HOSPITAL,

BY
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AN ACCOUNT,

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It is just ten years ago that I had the honour of reading before this Society the history of an epidemic of puerperal fever, which made its appearance in the wards of the hospital whilst I was an Assistant. I am sorry to have to say, that the same disease forms the subject of my present communication; and although these two epidemics which it has been my lot (may I not say 'misfortune'?) to witness, did not present any very marked points of contrast or dissimilarity; still, I entertain the hope that a concise account of the recent visitation may not prove destitute of interest to the members of the Society. Indeed, if nothing else, it is of some importance to study the characters that disease puts on at distant intervals of time, —to observe the alterations in type manifested by the same structural lesions under epidemical or '*constitutio anni*' influences.

Although more has been written upon puerperal fever than on any other subject of obstetric medicine, still there are many questions belonging to it that remain unsolved, and it offers difficulties and obscurities which we cannot, in the present state of our knowledge, get over or explain. If these obstacles are ever to be surmounted, it will not be by abstract reasoning, or hypothetical conjecture, but by careful deductions from a large accumulation of well-ascertained facts.

With this impression strong on my mind, I entered upon the task of collecting and arranging the materials which form the substance of this paper, endeavouring, to the best of my humble ability, to observe closely, to record faithfully, and to infer cautiously.

The epidemic, whose history I am about to bring forward, unequivocally declared itself in the first week of last December, and subsided in the middle of February. Unlike the one of 1845, its outbreak cannot be said to have been either sudden or unexpected, inasmuch as twelve or fourteen cases of puerperal peritonitis and phlebitis, together with a few isolated examples of typhus and scarlatina, had occurred in the house during the preceding nine months.

From the beginning of December to the 14th February, 182 women were confined in the hospital. This, I may just remark, is not half the average number of deliveries in the same period, and

was owing to a stop having been put, in the latter part of December and during all January, to the admission of patients, except such as were so near delivery that it would have been attended with imminent risk to send them away.

Now of these 182 women, 38, that is 1 in every 5, were unequivocally affected with the symptoms of the disease; and out of these 38 so affected 17 recovered, and 21 died, making the proportion of fatalities nearly 1 in 8 of all admitted; a frightful rate of mortality, and more than tenfold the average of this hospital.

In three of the above cases the puerperal disease was complicated with scarlatina. Two of these died, and the third made an excellent recovery, though the metritic attack was a marked one, and the scarlatina very severe, showing itself so early as the second day after delivery, and presenting in its course a truly formidable array of symptoms. On two occasions this woman seemed to owe her preservation solely to the liberal exhibition of wine and brandy, and this too at the very time when we had every reason to fear the existence of uterine inflammation.

It would be wearisome and tedious were I to give the individual history of all these cases, and yet I am quite at a loss how to classify or arrange them, not knowing what to take as the basis of any such classification, as they presented considerable variety in their symptoms, course, and morbid appearances. For example, in many cases, including some of the most malignant, there was no initiatory rigor whatsoever. Again, intense abdominal pain was a prominent feature of some cases from the onset to the termination; whilst in others, equally fatal, there was *no* complaint of the belly. Vomiting, likewise, was an early and constant attendant upon the disease in not a few instances, whilst in some it did not appear at all, or only at the close. And so on with the morbid appearances; some cases presenting intense peritonitis, others phlebitis, and a few putrescence of the uterus, and these either separately or conjointly. There were two features, however, common to them all, namely, a very rapid circulation, the pulse ranging from 120 to 140, and a marked adynamic type; so marked, indeed, that in two cases only did I feel justified in making trial of phlebotomy, and these, as you may suppose, were selected cases. Yet, in each of them, the supervention of syncope rendered it necessary to discontinue the bleeding before ten ounces of blood had been abstracted, one losing about seven, and the other nine fluid ounces; and what is still more worthy of attention, is the fact, that in neither of these instances did the blood exhibit, after some hours standing, any of the characters indicative of inflammation. Both these patients died.

In nothing did the various cases differ so much as the manner in which the disease made its invasion. In the majority a rigor announced its first onset, this being speedily followed by pain or uneasiness in the uterus; except in three or four instances, the pain was not by any means intolerable or severe at the commencement, or even for some hours afterwards. Tenderness of the uterus to

pressure, however, with perceptible augmentation of its bulk, was almost invariably found to be present from an early period of each case.

The first approaches of the disease, when not ushered in by rigor, were sometimes remarkably slow and insidious,—the only deviations from normal convalescence being a trivial acceleration of the pulse and a slightly furred state of the tongue, with, perhaps, diminished secretion of milk. On two or three occasions the attack began apparently with after pains, or at least with pains of an intermitting character, commencing almost immediately after delivery, and so equivocal in their nature, that it was impossible to say when they ceased to be purely spasmodic and became inflammatory. Mr. Hey, of Leeds, in his *Treatise on Puerperal Fever*, makes the remark, “that during the epidemic season lying-in women were unusually subject to after pains, and those of a more violent kind than ordinary.” My recent experience is quite in accordance with this observation.

The patient’s own representation of her state we found could not always be relied on, owing to her unconsciousness of the presence or the progress of the malady. Frequently her statements on this head, though made with confidence and complacency, were yet so utterly at variance with the symptoms and actual condition of the patient, that the most inexperienced observer could scarcely have been deceived by them for one moment. Whether this apparent ignorance of her real state arose from an unwillingness to believe she was affected with illness, or formed part of the disorder, I cannot take upon me to say; but certain it is that no less than four or five of these poor creatures have assured me, in language of gratitude and self-satisfaction, that they felt perfectly well when their general symptoms plainly forbade all hope of recovery.

This complete unconsciousness of danger, however remote, at a time when the hand of death was almost upon the patient, was a curious and distressing feature of the disease; and is the more remarkable from the fact, that these women were apparently in full and perfect possession of their mental faculties. I have once or twice before observed the same in women dying of pure metro-phlebitis.

Vomiting was not by any means a very prominent or constant symptom, except in the marked peritonitic cases; though in nearly all the fatal cases it came on some hours before death. Several of those who recovered had sickness of stomach, and a few of them even vomited large quantities of the dark-green tenacious fluid which has been aptly compared to green paint.

Guided by the experience of this epidemic, I feel disposed to regard the state of the tongue as a more reliable prognostic than any other *single* symptom. With only one or two partial exceptions, I never saw a patient recover when the tongue had become dry, or brown, or glazed; I have observed this symptom before any of the others had assumed a mortal or even threatening character; nor was it absent in any of the fatal cases of the disease.

At the outset of an attack the tongue was usually white, slightly furred, and somewhat less moist than natural. In many cases this state of the organ has been the very first symptom to excite alarm, and to apprise us of the coming storm.

As the disease made progress, the next unfavourable change observed in the state of the tongue was a dry, brownish streak down its centre, and more remarkable towards the base. This condition gradually extended until the entire dorsal surface of the organ was involved.

I think I am justified in asserting that the prevailing character of the tongue in the late epidemic was a close approximation to what is usually called the 'typhoid tongue,' and this is one symptom wherein it differed from the epidemic of 1845, in which the tongue presented most usually a broad, soft, creamy appearance. Mr. Hey, in his Account of the Puerperal Fever as it visited Leeds, makes the following remarks, which are pertinent to our present subject, as marking the contrast, in this symptom, between the two epidemics:—

"The tongue was never incrustated with the dry brown fur of typhus, except the disease was of long continuance, or had been improperly treated. It was generally moist and soft, and though it was not unfrequently covered with a thick white or brownish fur, yet it *was often but little altered from its natural appearance to the last, even in bad cases.*"

Diarrhœa was present in most of our cases, but was not so conspicuous or so formidable a complication as in the epidemic of 1845. I cannot but think that its first production was often attributable to the mercury and some of the other remedies which were used to subdue the disease; had it been otherwise, it is probable we should have experienced more difficulty in restraining it.

Fulness of the belly, with tympanitis to a greater or less extent, was almost universal, but in the individual cases this condition did not become remarkable till an advanced stage of the complaint, except in those which showed from an early period a preponderance of the symptoms referable to inflammation of the peritoneum.

The extreme rarity of cerebral disturbance in the course of puerperal fever is attested by nearly all observers, and the general tenor of my own experience agrees therewith. Nevertheless, I saw four cases which were exceptions to this rule. Two women, some hours after the first appearance of the disease, became quite lethargic, insomuch that it was only with great difficulty they could be roused to any degree of consciousness; and in this state, closely bordering on coma, they remained till their death, not many hours after. Another patient was affected in quite an opposite way. She was very restless and excited, wanting to get out of bed, and with difficulty restrained from doing so. Along with this she had a kind of noisy delirium, bearing a very close resemblance to one form of puerperal mania. These three women exhibited in a marked degree the same morbid appearance, namely putrescence of the in-

terior of the uterus and sloughing of the vagina. The fourth patient actually became maniacal three or four days after the development of puerperal fever. In the course of a week, however, she regained possession of her reason, but was very near dying of the puerperal fever.

There seemed to exist throughout the epidemic a strong tendency to putrescence or sloughing of the uterus and vagina, and this, too, quite irrespective of the length or character of the labour. In six cases we had direct proof of the existence of this gangrenous condition; two of these were patients that recovered and had sloughing of the vagina.

This constitutes an important feature in the late epidemic, and places it in strong contrast with the disease as it presented itself to Dr. Joseph Clarke and Dr. Collins; for neither of these authors make any mention of such having occurred in their experience.

Dr. Collins, in describing the morbid changes which he met with in the uterus, as a result of puerperal fever, thus expresses himself:—"The uterus, in the great majority, was quite natural in appearance; in some it was soft and flabby; and in a few, unhealthy matter was found in the sinuses."

Elsewhere in his report he states that only one case of sloughing of the urethra occurred during his seven years' Mastership.

Dr. Clarke, in his account of the epidemic of 1787-8, distinctly says that no unequivocal marks of putrescency in any part of the system appeared in the disease.

It has already been stated that in every instance the pulse was found to be very rapid. At the commencement of an attack it was rarely below 112, occasionally much higher: and as the symptoms became more developed, and the disease made progress, the pulse commonly rose to 130, 140, and even 160. The other characters of the pulse were sufficiently remarkable to render them deserving of notice. In no one instance could we have applied to it the epithet "incompressible;" on the contrary, it was invariably soft and yielding, and gave to the finger a sensation that is best described by calling it "liquid or undulating."

During the epidemic of 1845, and I believe in former epidemics also, trismus and convulsions prevailed to an unusual extent among the children born in the hospital. It is a fact, however, worth recording, that not a single example of either of these complaints presented itself during the entire period of the late visitation.

It rarely happens that puerperal fever breaks out in the hospital without its contemporary appearance in private practice; and it never happens, I believe, that it prevails to any extent outside of the hospital without appearing among the patients within its walls. On the late occasion I had reason to know that several deaths had occurred from the disease amongst women confined at their own homes, and lacking neither comfort nor attention, before it visited the hospital. Nor since then were its ravages confined to the poor inmates of our wards; for many women among even the upper classes

of society were carried off under its fatal influence. During the months of December and January no less than twelve of such deaths, in and about Dublin, came to my own knowledge; and I have heard of four or five more occurring in the beginning of last month.

On the outset of the fever in the hospital it displayed uncommon virulence, and the first seven patients who were attacked fell victims to its deadly malignity.

It may not, perhaps, be uninteresting to mention the number attacked on different successive days, as marking, to a certain extent, the progress of the epidemic. Thus, on each of the following days, viz., the 1st, 3rd, 4th, 6th, 9th, 10th, 11th, and 12th of December, there was *one* woman seized with the disorder; *three* on the 13th; and *three* on the 15th: on no subsequent day of this month was there more than one; and on many days not one was attacked; but in February *two* were attacked on the 8th; *two* on the 9th; and *two* on the 10th.

With respect to the period after delivery at which the patient was seized, the following are the general results:—2 were attacked in three hours from the completion of labour; 1 in four hours; 1 in twelve; 1 in fourteen; 1 in seventeen; and 1 in twenty-two hours. Each of these seven cases terminated fatally.

1 was seized in twenty-two hours after delivery, and 1 in twenty-three; the former recovered, and the latter died. Thus, we see, of 9 patients, in whom the complaint manifested itself on the first day of childbed, 8 died; 12 were affected on the second day, 6 of whom died; 10 were attacked on the third day, and of this number the disease proved fatal to 3.

One woman, who was slowly recovering from an attack of scarlatina which came on soon after delivery, was seized with symptoms of peritonitis on the tenth day, under which she rapidly sank. There are yet five cases to be accounted for, but in these we could not fix the precise day on which the disease attacked them, so stealthy and imperceptible were its incipient advances.

This low, insidious manner in which the disorder not unfrequently crept into the system, (if I may so say) taking hold upon the vitals without giving any unequivocal evidence of its presence, constitutes, I think, a remarkable feature of the epidemic, and places it in strong contrast with the epidemics described by Gordon, Hey, Armstrong, Joseph Clarke, Collins, and others.

From Dr. Collins' report of the hospital it would appear that between one-third and one-fourth of all the patients admitted were primiparæ, and this exactly corresponds with Dr. Hardy's and my report. But amongst the patients attacked with puerperal fever, in the late epidemic, a much larger proportion than the above were confined of first children; in fact, 19, or one-half of the 38, had been pregnant for the first time. Curious to say, Dr. Collins' experience on this point is exactly the same as my own, for of his 88 cases of puerperal fever, 44, the one-half, we perceive, were women in their first labours.

Although I have not made it a matter of special statistical investigation, still I think I am correct in saying, that those women who were in bad health, or suffering any chronic complaint at the time of admission, as well as those who had tedious or difficult labours, were more liable than others to become the subjects of puerperal fever.

Dr. Joseph Clarke's experience upon this point agrees with mine. He observes:—"Most of our patients attacked in the year 1787 were admitted in a weakly state, or had tedious and fatiguing labours."

With reference to the important and much debated question of the contagiousness of puerperal fever, my late experience does not enable me to say anything decisive. Two facts, however, I may be permitted to mention as being, in some degree, relevant to this point. On four different occasions it happened that the two patients in adjoining beds were seized with the disorder. I do not attach any weight to this circumstance myself, but think it right to mention it.

The other fact easily admits of being construed into a proof of the contagious nature of the disease.

In two opposite wards (Nos. 7 and 8), on the same corridor, there were nine fatal cases, nearly one-half of the entire number of fatalities, and more than occurred in any other three wards. Now the only way in which I can account for this is, that a mother and daughter are respectively the nurses of these two wards, and having, on this account, more intercommunication, would be very likely to convey infection from one ward to the other.

The duration of the disease in individual cases varied a good deal. 1 patient died in fifty hours from the period of invasion; 1 in sixty hours; and 2 in seventy-two hours. These were our most rapid cases. Four or five days was the average length of time that patients lived after being seized with a fatal attack of the fever.

The influence of the seasons has been sometimes alluded to as a cause of childbed fever. In the "*Mémoires sur les Hôpitaux de Paris*," M. Tenon has given a series of Tables exhibiting the number of births, and the mortality of lying-in women and children at the Hôtel Dieu, in the several months of each year of the decade from 1776 to 1786 inclusive. These statistics show December to be the most fatal month, and June, July, August, September, and October, the least so.

Of the mode of treatment pursued with the different patients who were attacked with the disease, I cannot here give a detailed account; but a brief outline of the general principles on which it was conducted, and of the comparative utility of the principal remedies employed, may prove not unacceptable to the Society.

I believe it may with truth be affirmed that bleeding, in this epidemic, was inadmissible. The only cases in which it was tried proved it so, and both of them died, the disease seeming to be wholly unaffected, if not aggravated, by the measure. My opinion on this point is not in the least shaken by the dictum of Gordon,—“That

puerperal fever is inflammatory at the commencement, and putrid only in its progress;" backed though it be by the experience of Hey, Armstrong,² and Professor Meigs, the latest and most voluminous author on puerperal fever. Gordon himself states, that unless he could abstract twenty-four ounces of blood at the first depletion he despaired of the patient's recovery; and this very statement explains the secret of his success. His cases were nearly all examples of the sthenic, synochal, phlogistic form of the disease, which, as we all know, is by far the most manageable form. But the cases which would not bear bleeding, and which, in other words, approached to the low typhoid puerperal fever that is chiefly met with in hospitals, he found to be the most intractable and the most fatal. We find Dr. Meigs, too, saying, "very few persons can be expected to survive these child-bed fever inflammations, whether accidental or unavoidable, when the circumstances forbid a resort to blood-letting." In support of the supposition above thrown out, I would beg to draw attention to the significant fact, that each of these four authors, Gordon, Hey, Armstrong, and Meigs, the great champions for the lancet in the treatment of puerperal fever, derived their experience of the disease from *private practice*; and it is now well established that a strict parallel as to the mode and results of treatment can be rarely instituted between the disease as it presents itself in hospital and in general practice.

To return, however; although general bleeding was found so wholly useless, yet local depletion deserves to be mentioned in more qualified, if not more encouraging terms.

Most of our cases that recovered were leeches over the hypogastrium at the very beginning of the attack, and, so far as I am capable of judging, with decided benefit. No doubt the same means was likewise used with some that died; nevertheless, this does not alter my opinion.

Epithems of spirits of turpentine, hot-water fomentations, and linseed-meal poultices, and hot salt, were external applications in constant use; and, though not in themselves of a powerful nature, were, nevertheless, found to be indispensable auxiliaries in the treatment.

Mercury was tried in a large proportion of cases, and in various doses, but I cannot say I ever observed any decided improvement to have been traceable to its specific action on the system. In some instances the disease progressed with such frightful rapidity that absolutely there was not time for the drug to make an impression upon the constitution. In other cases the mercury seemed to produce diarrhœa, and had, therefore, to be laid aside. In two cases death occurred, notwithstanding that ptyalism had been excited. As a purgative it was in constant requisition, but always combined with, or followed by, other cathartics, and in this way it was found, as it always is, an efficient and useful agent. Many of our cases that recovered got repeated doses of calomel or blue pill, but in one instance only were the gums touched, so that if it cured the disease, it did so

without affecting the system. When exhibited with this intention, it was always combined with opium, and occasionally with camphor also.

Rectified oil of turpentine is another remedy that was largely employed, but in only two, or at most in three cases, did it seem to have been decidedly productive of benefit, and in all these cases wine, and in two of them camphor, was given at the same time. Combined with an equal quantity (three or four drachms) of castor-oil, the turpentine proved to be a most valuable anti-flatulent purgative. On other occasions it was exhibited in one or two drachm doses every hour or second hour. It never sickened the stomach, and patients made no complaint of taking it.

In one case I tried the *opium* treatment, giving a grain every hour till unequivocal indications of narcotism came on (which happened after six grains of the drug had been taken), but without any amelioration of the symptoms. This woman had been bled before the opium treatment commenced.

If we might judge from this solitary instance, the disease in question does not seem to engender any very apparent tolerance to this medicine.

Wine was allowed to all our cases; and in some from a very early period of the disorder. All the patients who recovered from a bad attack of the complaint got wine to the extent of eight, ten, or twelve fluid ounces in the twenty-four hours; and this from the second or third day of their illness. Some of them, too, got brandy along with the wine. In forming an estimate of the utility of this stimulant, I would wish to express myself with the strictest caution and reserve; but I can with truth say, that on no occasion did I see reason to regret its exhibition; whilst in some cases its good effects did not admit of doubt. If I had to encounter another outbreak of puerperal fever, similar to that just subsided, I should, with my present knowledge, give wine much more freely to my patients.

After a calm and deliberate survey of the symptoms, treatment, and other attendant circumstances of the late epidemic—viewed in relation to this all-important question of treatment—the practical conclusion at which I arrive is embodied in this short precept:—To leech promptly—to purge actively—and to stimulate freely. Such, at least, are the leading principles that would guide me, and the treatment of all our successful cases was based upon them. In making this statement I am fully aware of the facts that the same line of treatment may not be adapted to different epidemics, or even to the same epidemic as treated in hospital and in private practice.

The proportion of fatal cases in this epidemic is, I believe, somewhat below the average mortality in puerperal fever when occurring in hospital patients, 21 having died out of 38, which is exactly at the rate of 55 deaths per cent.^a If this result is in any

^a Thus, Dr. Joseph Clarke lost 21 out of 28 patients seized with puerperal fever in this hospital; Dr. Collins lost 56 out of 88; and Dr. Johnson 10 out of 14;

degree attributable (and I am far from asserting that it is so) to the treatment employed, I would feel inclined to ascribe it to the fact of stimulants having been systematically used from an earlier period of each individual case, and given with more freedom, than has been heretofore recommended by any author that I know of, excepting, perhaps, Dr. Copeland; and even he did not go beyond camphor and turpentine.

It is but justice to remark here, that in adopting this, comparatively speaking, stimulant line of treatment, I only carried into effect a suggestion that had been previously thrown out by Dr. H. Kennedy, and which was embodied in a paper he read before this Society some years ago, wherein he traced a resemblance between puerperal fever and typhus, and referred them both to the same group or family of diseases^a.

Subjoined are the histories of a few cases which will serve to illustrate some of those features of the epidemic that I have endeavoured to portray in the preceding observations.

Tedious Labour; Forceps; Puerperal Fever; Death.—A. R., a large, corpulent woman, was delivered of her first child, with the forceps, on 12th December, 1854, in consequence of arrest of the head in the pelvis. The operation, which only lasted twenty-five minutes, was performed whilst she was under the influence of chloroform, and the child was extracted alive. Early on the morning of the third day she had a rigor followed by slight uterine pain and tenderness, and pulse at 120. She was bled from the arm in a sitting posture, but before ten ounces of blood had escaped, she became so faint that it was necessary to tie up the arm. This blood was carefully laid aside, and when examined twenty-four hours afterwards, did not present a single inflammatory character. The clot was large and soft, and everywhere in contact with the sides of the vessel; its surface was not in any degree concave, nor was there a trace of buffy coat. Two dozen leeches were subsequently applied to the hypogastric region, and she was put on the use of calomel and opium at short intervals. On the next day she was not better, and had a bad night; pulse 120; belly full and tender over the uterus; but she makes no complaint of pain unless when pressure is applied.

William Hunter, in his hospital practice, had 31 deaths out of 32 cases; and Dr. Leake, in the Westminster Lying-in Hospital, lost 13 out of 19 patients affected with this fever. Thus, to sum up, in 181 cases there were 131 deaths, which is at the rate of nearly $72\frac{1}{2}$ per cent.

^a Since writing the above Dr. Sinclair has informed me that the mode of treatment pursued here in puerperal fever by my predecessor, Dr. Shekleton, differed in only one point from that above described: Dr. Shekleton did not purge as actively as I did. The results of his experience in the disease I do not know; but I am happy to be able to state, that a clinical report is in course of preparation, which will furnish us with full particulars, not alone on this point, but of the practice and statistics of the Hospital during the entire period of Dr. Shekleton's mastership. Such a work must prove of immense value. And I have no doubt but that the two gentlemen, Dr. E. B. Sinclair and Dr. George Johnston, to whose hands its preparation has been intrusted, will fulfil this duty in an able and efficient manner.

Another relay of leeches was put on, and the mercury continued. The symptoms, however, did not receive any check by this treatment, and she died on the eighth day. She was much harassed with vomiting for the last three days before her death, and the abdomen was greatly distended from meteorism, but she did not suffer from pain in the belly unless when pressure was made upon it. Mercurial ptyalism was induced in this woman. There was not a post-mortem examination of the body, but I had no doubt she died of peritonitis commencing in the uterus, and radiating from thence over the rest of the serous membrane.

Natural Labour; Delirium; Gangræna Uteri; Death.—M. K., a large fat woman, was confined of her first child, after a labour of twenty-four hours' duration; but the second stage only lasted about a quarter of this time. She was delivered on the evening of 3rd Dec., 1854, and on the following morning her pulse was found to be rapid, and her countenance flushed. She got some calomel and Dover's powder last night, and a dose of oil and turpentine this morning, which operated very well during the day, after which she got repeated doses of James' and gray powders. This case subsequently ran a very rapid course, the prominent symptoms being a high degree of delirium, very much resembling mania, with an exceedingly rapid, feeble pulse, and a tumid, tympanitic abdomen, but without vomiting, or any complaint of abdominal pain. On examining the body the interior of the uterus and vagina presented one continuous slough.

This was a rapid case, and from the very first exhibited a strongly marked adynamic character. That the sloughing of the vagina was in no way due to the labour will be apparent from the fact that the membranes did not rupture until five hours before the birth of the child. This was one of the few cases of puerperal fever which presented any sensorial disturbance.

Difficult Labour; Craniotomy; Death.—In this case delivery had to be effected by means of the perforator and crotchet, in consequence of impaction of the head, and the rapid supervention of bad symptoms, although the entire length of the labour was only twenty-six hours.

M. M., the subject of the case, was a stout, healthy young woman, pregnant for the first time, and was delivered December 7, 1854. On the third day, at morning visit, the pulse was 120, small and weak; and the labia were enormously swollen, and presented on their internal surfaces gangrenous spots of an ash colour. She was lying in a stupid, lethargic state, from which she could with difficulty be roused to a sufficient degree of consciousness to protrude the tongue, and no more.

The abdomen was tumid and tympanitic; uterus very large. She expired some hours afterwards.

A post-mortem examination could not be made, but I have no doubt that we would have found the same appearances as in the case immediately preceding: indeed, we had positive evidence of the va-

gina being in a sloughy condition. The rather sudden occurrence of stupor, with partial obliteration of consciousness, were very remarkable features in this case.

Natural Labour; Scarlatina; Metritis; Recovery.—M. W., a strong, plethoric woman, aged 30, was delivered of her first child after a short and easy labour, on December 9, 1854. Scarlatina of a rather severe form appeared on the second day. The accompanying fever was high, nevertheless, she was going on pretty well up to the eighth day, at which time desquamation had commenced, when the pulse rose in frequency; the tongue became dry and furred; there was sickness of stomach, and pain and tenderness of the uterus, which felt greatly enlarged. Along with these alarming symptoms there was great prostration of strength.

In her condition the abstraction of blood seemed inadmissible: so the abdomen was, in the first instance, stupefied with turpentine; linseed-meal poultices were then applied, and renewed from time to time; and subsequently a large blister was put on. The bowels were acted upon by oil and turpentine; and she got small doses of calomel and James' powder, with anodynes at night. Wine, and occasionally brandy, when she seemed very low, were exhibited. Under this treatment the symptoms of uterine inflammation slowly subsided, and eventually she made a very good recovery.

At the time this woman was seized with the symptoms of metritis, puerperal fever was prevailing to an alarming extent in the hospital. This was one of the first cases of puerperal fever in which I ventured to give wine; and the good effects resulting from its administration were most marked. I have already alluded to the case in reference to this particular feature of its history.

Natural Labour; Phlebitis; Arthritis; Death.—B. K. was delivered of her second child after a short and easy labour, on the 18th December, 1854. The fœtus was small, about eighth month, hydrocephalic, and very putrid. At the moment of its expulsion a quantity of abominably fetid gas was remarked to escape from the vagina.

On the second day she had some slight tenderness over the uterus, without any acceleration of pulse, however. This was removed: a turpentine stupe and dose of castor-oil and turpentine. She was very well on the third and fourth days, the pulse being only 88; and no uneasiness whatsoever in the uterus; still, there was but a very scanty secretion of milk, and the tongue was somewhat dry towards the base in the median line. On the fifth day the pulse was 100; but she had no uterine uneasiness of any description, and expressed loud murmurs at not being allowed up. The next day brought no change in her condition; and on the day following (i. e. her seventh day) she was worse: the pulse was 110; the tongue dry and glazed; no abdominal pain or distress, but she complains of some pain in the ball of left great toe. On examining this, the metatarso-phalangeal joint was found swollen, and the integument of a shining bright red. On moving the toe or pressing the joint she evinced acute pain. She only lived to the morning of the eleventh

day, notwithstanding that she got wine and brandy pretty freely. For six hours before she died the pulse had entirely ceased in the arms, and the hands were red and cold; yet she retained her entire consciousness, was fully and acutely alive to all passing around her, and able to move and turn in bed without assistance. There was a sort of quickness and excitability in this woman's manner, during the last few days of her illness, that is the nearest thing I have seen to the "hysteroidal excitement," described by Professor Meigs as being a very characteristic attendant upon uterine phlebitis. This patient had no rigor.

I regarded this case as an example of pure metro-phlebitis; indeed, the almost total absence of any inflammatory symptom would dispose one to believe that the blood had been poisoned by the *direct absorption* of some noxious matter from the interior of the uterus. The highly putrid state of the foetus, and the fact of an abominably offensive gas having followed its expulsion from the uterus, give an air of probability to this supposition. Unfortunately the body could not be examined.

Natural Labour ; Puerperal Fever ; Sloughing of Vagina ; Recovery.—M. C., a stout, very fat young woman, had a rigor on January 1, 1855, forty-one hours after delivery. She was a primipara, and her labour was natural and easy; the rigor was at 1 A. M., and was speedily succeeded by acute pain in the lower belly, making her cry out with agony; she got a draught containing two drachms of oil of turpentine and twenty-five minims of laudanum; two dozen leeches were also applied over the uterus. At 9 A. M. she felt much better; pulse 136 and soft; tongue rather dry and yellowish; head-ach; thirst; a linseed-meal poultice was directed to the abdomen, and a drachm of rectified oil of turpentine to be taken every second hour: this treatment, with the addition of an anodyne at bedtime, was continued for the next two days, during which her state was much the same as now described. On the evening of the fifth day the pulse was 118, soft and weak; she was vomiting much green fluid, and there were diarrhœa and retention of urine; the belly was tumid, and there was some slight tenderness on pressure being made over the uterus; the belly was ordered to be very well fomented with flannels wrung out of hot water, and then poulticed with linseed-meal; she got two grains of opium and eight of camphor, and she was allowed two ounces of brandy, diluted with water, in the course of the night. The day following she was a shade better, and the turpentine treatment was continued; she was allowed four ounces of sherry wine in the course of the day, and the same quantity for the night. On the evening of the seventh day a flocculent slough was discharged from the vagina, and was succeeded by two others at subsequent periods. A large patch of erysipelas appeared in the right iliac region on the eighth day; this remained stationary for some days, and then declined. Her pulse at this time (eighth day) was 116; some diarrhœa was present, and she frequently had

sickness of stomach; the abdomen was still very full and tympanitic, and the tongue red and dry. Her quantity of wine was now increased to ten ounces in the twenty-four hours; she was allowed strong beef tea, and was ordered five grains of camphor and five of Dover's powder thrice a day. On the ninth day the pulse was still 116, but the erysipelatous inflammation was decidedly less. Meat was now allowed her in the place of beef tea. She amended slowly from this time, and was put on the use of sulphate of quina on the twelfth day. From imprudence in getting up she had two relapses which considerably retarded her recovery, so that she was not discharged till the last day of the month.

The patient who lay in the next bed to this woman was attacked some hours before her, with malignant puerperal fever that proved fatal in three days. She was twice leeches, and did not get any stimulants till a late period of the disease, too late indeed to be of any service. This omission I much regretted, seeing the good effect they had on the patient whose case I have just related.

Natural Labour; Puerperal Fever; Recovery.—A. K. was delivered of her first child January 6th, 1855, after a short and easy labour. On the second day the pulse was 140; the uterus large, hard, and extremely tender to pressure, and she was teased with a frequent cough; twenty leeches were applied over the uterus, followed by a poultice of linseed-meal, and she was ordered pills of calomel, morphia, and ipecacuanha every second hour. She expressed herself much better next day, and had no pain in the uterus unless when it was pressed upon; the pulse was 120, and the bowels free. On the evening of the fifth day the pulse was 120; she complained of occasional pains in the belly; was teased with hiccup, and vomited her drink; pills were now stopped, and she was ordered two drachms of oil of turpentine, and two scruples of acetum opii, and to have three ounces of wine during the night. Her state during her eighth and ninth days seemed very critical, and such as almost to shut out the hopes of recovery. She had frequent hiccup, occasional vomiting, diarrhœa, a tense, tympanitic belly, and dry red tongue; along with these unfavourable symptoms the pulse ranged from 124 to 134, and was small and weak. One feature there was, however, to relieve this dark picture: she was invariably cheerful, and perfectly sanguine as to her recovery. Her allowance of wine was increased to eight ounces in the twenty-four hours; the belly was well rubbed with a strong turpentine liniment, and she was ordered pills of quina, camphor, and opium, every third hour. The next day her pulse was 110, but she still had vomiting, and the tongue was very red; she was allowed a mutton chop, wine, and pills as before; a turpentine enema was also administered with the long tube, and it brought away a good deal of flatus. A very decided improvement had manifested itself by the twelfth day, and the pulse had come down to 108. At this time she was getting sixteen ounces of wine in the twenty-four hours, a mutton chop for

dinner, and the pills of quina, camphor, and opium. From this date her recovery progressed most favourably, and she was discharged on her twenty-second day.

There was no rigor in this case, nor did she even complain of much pain or uneasiness in the abdomen. This latter is not, however, to be always regarded as a favourable symptom, as some of the most malignant cases were quite free from abdominal pain.

Natural Labour; Puerperal Fever; Recovery.—E. B., a stout, coarse-looking young woman, was confined of her first child on January 13th, 1855; her labour was rapid and easy. Thirty-nine hours after delivery, and when she was apparently going on as well as possible, she got a very severe rigor: this occurred at half-past 10 o'clock, p. m. A bag of hot salt was immediately put on the belly, and in two hours afterwards thirty leeches were applied, as she complained of great pain and extreme tenderness over the uterus; a linseed-meal poultice succeeded the leeches; she got two drachms of turpentine, and half a drachm of tincture of opium; her pulse next morning was 92, very soft and weak; tongue white; uterus large and somewhat tender; appears heavy and dull; she got some aperient medicine this morning, which operated briskly on the bowels; she was allowed some wine and beef tea, and ordered a drachm of turpentine, with four minims of the vinegar of opium, every second hour; a poultice to the belly. After this she was going on very well till the evening of the fifth day, when she had a smart rigor, followed by a rise in the pulse from 90 to 118. She now got two drachms of turpentine, and forty drops of solution of acetate of morphia (about two-thirds of a grain of the salt); and a linseed-meal poultice was put on the belly. She had a good night, and although the uterus next day was still large and tender, and the lochia almost entirely suppressed, still the pulse was only 88. A large, warm cataplasm was again applied over the belly, and she was ordered five grains of Dover's powder and five of camphor three times in the day; and to have beef tea and some sherry wine (four ounces). She gave us no anxiety after this, as her recovery proceeded without interruption.

In the preceding histories I have purposely been as brief as possible, my chief object being, not to give the details of each case, but merely its salient features.

It affords me much pleasure, in concluding this paper, to bear testimony to the zeal and alacrity evinced by the two assistants, Dr. W. B. Jennings and Dr. George Montgomery, in rendering that close and constant attention to the sick which is so needful during an epidemic of puerperal fever, and without which the best directed treatment must prove unavailing.

